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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/653,695	09/02/2003	Kyong-Min Shin	U 014789-4	3486
140	7590	09/26/2005	EXAMINER	
LADAS & PARRY 26 WEST 61ST STREET NEW YORK, NY 10023			PRONE, CHRISTOPHER D	
			ART UNIT	PAPER NUMBER
			3738	

DATE MAILED: 09/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/653,695

Applicant(s)

SHIN ET AL.

Examiner

Christopher D. Prone

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3738

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103 as being unpatentable over United States Patent 5,667,523 Bynon in view of United States Patent 5,718,159 Thompson.

Bynon discloses the invention substantially as claimed being a self-expandable stent assembly comprising inside and outside zigzag stent bodies with a tubular graft member closely fit between said inside and outside bodies, all having similar lengths with their ends being integrated into a single structure shown in figures 1-18 of Bynon.

However, Bynon does not disclose the P 2P zigzag stent configuration, the use of memory metal wires, or that the inner tubular member comprises rubber.

Thompson teaches the use of a stent with a zigzag structure comprising 2 wires made of memory metal (2:60-67), wherein a first wire has twice the longitudinal length of a second wire shown in figures 15-17, covered in a tubular member comprising textile sheets made of a rubber polyurethane (4:7-17) in the

Art Unit: 3738

same field of endeavor for the purpose of providing a more flexible vascular stent with reduced permeability.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the stent configuration and memory wire material of Thompson in the assembly of Bynon in order to create a dual supported stent that has increased flexibility, shape memory characteristics and a impermeable coating, yet readily accommodating radial expansion and contraction

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bynon and Thompson as applied to claim 4 above, and further in view of United States Patent 5,522,881 Lentz.

The combination of Bynon and Thompson as described above discloses the invention substantially as claimed being a dual stent structure with its ends immersed in a polyurethane solution (13:23-29).

However, the combination does not disclose that the ends of the inside and outside stents are stitched to the rubber tubular member.

Lentz teaches the use of an implantable tubular member in the same field of endeavor comprising a tubular conduit member that is sutured to stent body (4:10-13) for the purpose of securely anchoring the stent to the conduit and preventing the stent from unwinding and or puncturing a body vessel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the sutures of Lentz in combination with the

Art Unit: 3738

dual stent structure of Bynon and Thompson, described above, in order to prevent the stent ends from unwinding and or puncturing a body vessel.

### ***Response to Arguments***

Applicant's arguments filed 7/8/05 have been fully considered but they are not persuasive.

Applicant's main arguments are directed toward a lack of motivation for combinations described in the rejection mailed on 4/4/05. However, as described in that rejection and further explained above there is valid motivation. The motivation for the combination of Boylan and Thompson is to increase the flexibility of the stent, which will make it easier for the operator to deliver the stent and for the stent to adapt to any size and shape that the surgery requires. The combination also provides the stent with shape memory characteristics, which also aid in delivery of the stent and the stents expansion to full the operation site. All of the enhanced properties still allow the stent to be impermeable to undesired fluids. The motivation for further adding the sutures of Lentz to the combination are for further securing the stent stands to the conduit. The sutures prevent strands from unwinding and separating.

Applicant further argues that the stent of Boylan does not disclose multiple stands. However the multiple stands are clearly shown in figures 9, 15, and 17 of Boylan.

Applicant further argues that the tube of Boylan does not permit the implant to bend. However the combination of Boylan and Thompson comprises

Art Unit: 3738

a stent structure and tubular member both with enhanced flexibility disclosed by Thompson.

Applicant further argues that Lents does not disclose the sutures, but as described above Lents clearly does in column 4 on lines 10-13.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D. Prone whose telephone number is (571) 272-6085. The examiner can normally be reached on Monday Through Fri 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached on (571) 272-4754.


Art Unit: 3738

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CDP

Christopher D Prone  
Examiner  
Art Unit 3738

  
CORRINE McDERMOTT  
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